ABSTRACT OF THE DISCLOSURE

A system for protecting a composite-body aircraft from damage caused by lightning strikes includes a Faraday cage defined on the exterior surface of the aircraft body by a continuous, electrically conductive grid that extends to the outermost lateral periphery of the body. In one possible embodiment in which the aircraft's body includes a plurality of composite panels that are joined at their adjacent edges by splice plates, the conductive grid may advantageously be formed by electrically conductive splice plates, *e.g.*, of titanium, that have their respective, adjacent ends electrically connected to each other, *e.g.*, with conductive straps and fasteners. The conductive grid provides preferential attachment points and conductive paths for lightning strikes on the surface of the aircraft, thereby shielding the interior of the grid from lightning damage. The conductive grid can optionally function as a ground return path for the aircraft's electrical system.